```
=> file jic
FILE 'JICST-EPLUS' ENTERED AT 15:53:11 ON 01 OCT 2002
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FILE COVERS 1985 TO 24 SEP 2002 (20020924/ED)

THE JICST-EPLUS FILE HAS BEEN RELOADED TO REFLECT THE 1999 CONTROLLED
TERM (/CT) THESAURUS RELOAD.

=> d que l54

L51 (      7174)SEA FILE=JICST-EPLUS ABB=ON  SOLID PHASE EXTRACTION/CT OR
                 SOLVENT EXTRACTION/CT OR  SOLID-LIQUID EXTRACTION/CT
L52 (     14157)SEA FILE=JICST-EPLUS ABB=ON  ENZYME ACTIVITY/CT
L53 (        23)SEA FILE=JICST-EPLUS ABB=ON  L51 AND L52
L54          11 SEA FILE=JICST-EPLUS ABB=ON  (FOOD# OR FEED OR SOLID#) AND L53


=> file caplus

FILE 'CAPLUS' ENTERED AT 15:53:12 ON 01 OCT 2002
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FILE COVERS 1907 - 1 Oct 2002  VOL 137 ISS 14
FILE LAST UPDATED: 30 Sep 2002  (20020930/ED)

  This file contains CAS Registry Numbers for easy and accurate
  substance identification.

CAS roles have been modified effective December 16, 2001. Please
check your SDI profiles to see if they need to be revised. For
information on CAS roles, enter HELP ROLES at an arrow prompt or use
the CAS Roles thesaurus (/RL field) in this file.

=> d que l65

L55 (    816783)SEA FILE=CAPLUS ABB=ON  PLU=ON  ?COLUMN? OR TUBE OR ?CYLINDER?

L56 (     12878)SEA FILE=CAPLUS ABB=ON  PLU=ON  FUNNEL
L57 (   1834774)SEA FILE=CAPLUS ABB=ON  ?EXTRACT? OR ?SEPARAT?
L58 (   1408922)SEA FILE=CAPLUS ABB=ON  SOLID# OR DISSOLV?
L59 (     13941)SEA FILE=CAPLUS ABB=ON  ((L55 OR L56)) (15A)(STOP(W)COCK## OR
                 VALVE# OR CLOSURE# OR STOPCOCK## OR STOPPER# OR PLUG# OR CORK#
                 OR SPOUT# OR CONDUIT# )
L60 (       947)SEA FILE=CAPLUS ABB=ON  L59(15A)L57
L61 (       129)SEA FILE=CAPLUS ABB=ON  L58 AND L60
```

```
L62 (         51)SEA FILE=CAPLUS ABB=ON  L61 AND (DEVICE# OR APPARAT## OR
                 INSTRUMENT?)
L63 (       3343)SEA FILE=CAPLUS ABB=ON  EXTRACTION APPARATUS/CT
L64 (          7)SEA FILE=CAPLUS ABB=ON  L63 AND L62
L65            4 SEA FILE=CAPLUS ABB=ON  L64 NOT (CHROMATOGRAPHY OR GAS OR
                 COUNTERCURRENT)/TI


=> d que l71

L66 (     816783)SEA FILE=CAPLUS ABB=ON  PLU=ON  ?COLUMN? OR TUBE OR ?CYLINDER?

L67 (      12878)SEA FILE=CAPLUS ABB=ON  PLU=ON  FUNNEL
L68 (      13941)SEA FILE=CAPLUS ABB=ON  ((L66 OR L67)) (15A)(STOP(W)COCK## OR
                 VALVE# OR CLOSURE# OR STOPCOCK## OR STOPPER# OR PLUG# OR CORK#
                 OR SPOUT# OR CONDUIT# )
L69 (       3343)SEA FILE=CAPLUS ABB=ON  EXTRACTION APPARATUS/CT
L70 (        206)SEA FILE=CAPLUS ABB=ON  L69 AND (FFD/RL OR 17/SC,SX)
L71            1 SEA FILE=CAPLUS ABB=ON  L70 AND L68

=> d que l75

L72 (       3932)SEA FILE=CAPLUS ABB=ON  ENZYMES/CT(L)ANT/RL
L73 (       7944)SEA FILE=CAPLUS ABB=ON  SOXHLET#
L74 (          2)SEA FILE=CAPLUS ABB=ON  L72 AND L73
L75            1 SEA FILE=CAPLUS ABB=ON  L74 AND SOYBEAN/TI

=> s l65 or l71 or l75

L122           6 L65 OR L71 OR L75

=> file biosis

FILE 'BIOSIS' ENTERED AT 15:53:16 ON 01 OCT 2002
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FILE COVERS 1969 TO DATE.
CAS REGISTRY NUMBERS AND CHEMICAL NAMES (CNs) PRESENT
FROM JANUARY 1969 TO DATE.

RECORDS LAST ADDED: 25 September 2002 (20020925/ED)


=> d que l84

L76 (     615768)SEA FILE=BIOSIS ABB=ON  ?EXTRACT? OR ?SEPARAT?
L77 (    3998569)SEA FILE=BIOSIS ABB=ON  ?ASSAY? OR DETERMIN? OR SCREEN? OR
                 MEASUR? OR DETECT? OR ANALY?
L78 (     139778)SEA FILE=BIOSIS ABB=ON  ENZYME#(10A)L77
L79 (     216874)SEA FILE=BIOSIS ABB=ON  CONTAINER# OR TUBE# OR ?CYLINDER? OR
                 ?FUNNEL? OR ?VESSEL?
L80 (     231037)SEA FILE=BIOSIS ABB=ON  DEVICE# OR APPARAT## OR INSTRUMENT#
L81 (       2334)SEA FILE=BIOSIS ABB=ON  L78 AND L79
L82 (         56)SEA FILE=BIOSIS ABB=ON  L81 AND L80
L83 (         16)SEA FILE=BIOSIS ABB=ON  L76 AND L82
L84            7 SEA FILE=BIOSIS ABB=ON  L83 AND (DEVICE# OR BED OR PELLET OR
                 VISCOMETER)/TI
```

FFD = Food or Feed use

ANT = Analyte RL = Role

SC, SX = section code or cross reference

17 = Food & Feed chemistry

```
=> d que l86

L85 (        51)SEA FILE=BIOSIS ABB=ON  SEPARATORY(3A)FUNNEL#
L86           3 SEA FILE=BIOSIS ABB=ON  L85 AND ENZYME#


=> s l84 or l86

L123        10 L84 OR L86

=> file hcaplus

FILE 'HCAPLUS' ENTERED AT 15:53:19 ON 01 OCT 2002
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FILE COVERS 1907 - 1 Oct 2002  VOL 137 ISS 14
FILE LAST UPDATED: 30 Sep 2002  (20020930/ED)

 This file contains CAS Registry Numbers for easy and accurate
 substance identification.

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check your SDI profiles to see if they need to be revised. For
information on CAS roles, enter HELP ROLES at an arrow prompt or use
the CAS Roles thesaurus (/RL field) in this file.

=> d que l89

L87 (      6759)SEA FILE=HCAPLUS ABB=ON  PLU=ON  ENZYMES/CT(L)(ANALYSIS OR
                ANT/RL)
L88 (      3531)SEA FILE=HCAPLUS ABB=ON  PLU=ON  EXTRACTION APPARATUS+NT/CT
L89           2 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L87 AND L88


=> d que l94

L90 (      5618)SEA FILE=HCAPLUS ABB=ON  PLU=ON  ANALYTICAL APPARATUS+OLD/CT
L91 (      6759)SEA FILE=HCAPLUS ABB=ON  PLU=ON  ENZYMES/CT(L)(ANALYSIS OR
                ANT/RL)
L92 (     51394)SEA FILE=HCAPLUS ABB=ON  PLU=ON  EXTRACTION+NT/CT
L93 (        32)SEA FILE=HCAPLUS ABB=ON  PLU=ON  L91 AND L92
L94           1 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L93 AND L90

=> d que l102
```

```
L95 (      6759)SEA FILE=HCAPLUS ABB=ON  PLU=ON  ENZYMES/CT(L)(ANALYSIS OR
                ANT/RL)
L96 (   1021795)SEA FILE=HCAPLUS ABB=ON  PLU=ON  SOLID
L97 (     51394)SEA FILE=HCAPLUS ABB=ON  PLU=ON  EXTRACTION+NT/CT
L98 (        32)SEA FILE=HCAPLUS ABB=ON  PLU=ON  L95 AND L97
L99 (         3)SEA FILE=HCAPLUS ABB=ON  PLU=ON  L96 AND L98
L100(      9931)SEA FILE=HCAPLUS ABB=ON  PLU=ON  ENZYMES/CT(L)ANST/RL
L101(         2)SEA FILE=HCAPLUS ABB=ON  PLU=ON  L99 AND L100
L102          1 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L101 AND SOLID/TI
```

ANST = analytical study

RL = Role

```
=> d que l108

L103(      3928)SEA FILE=HCAPLUS ABB=ON  PLU=ON  ENZYMES/CT(L)ANT/RL
L104(     23149)SEA FILE=HCAPLUS ABB=ON  PLU=ON  FOOD ANALYSIS+OLD/CT
L105(      4217)SEA FILE=HCAPLUS ABB=ON  PLU=ON  FEED ANALYSIS+OLD/CT
L106(        62)SEA FILE=HCAPLUS ABB=ON  PLU=ON  L103 AND (L104 OR L105)
L107(        14)SEA FILE=HCAPLUS ABB=ON  PLU=ON  L106 AND (APPARATUS OR
                DEVICE)
L108          2 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L107 AND SOLID

=> d que l112
```

ANT = Analyte

```
L109(      3928)SEA FILE=HCAPLUS ABB=ON  PLU=ON  ENZYMES/CT(L)ANT/RL
L110(       113)SEA FILE=HCAPLUS ABB=ON  PLU=ON  L109 AND 17/SC,SX
L111(        14)SEA FILE=HCAPLUS ABB=ON  PLU=ON  L110 AND (APPARATUS OR
                DEVICE)
L112          4 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L111 AND (EXTRACT? OR
                DISSOLV? OR WASH?)

=> s l89 or l94 or l102 or l108 or l112

L124         10 L89 OR L94 OR L102 OR L108 OR L112

=> file wpix

FILE 'WPIX' ENTERED AT 15:53:24 ON 01 OCT 2002
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FILE LAST UPDATED: 26 SEP 2002              <20020926/UP>
MOST RECENT DERWENT UPDATE          200262   <200262/DW>
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>>> SLART (Simultaneous Left and Right Truncation) is now
    available in the /ABEX field. An additional search field
    /BIX is also provided which comprises both /BI and /ABEX <<<

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    enabled in WPINDEX/WPIDS and WPIX  <<<

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=> d que l121

L113(   1080423)SEA FILE=WPIX ABB=ON  ?COLUMN? OR TUBE OR ?CYLINDER? OR
                FUNNEL#
L114(       271)SEA FILE=WPIX ABB=ON  SOXHLET#
L115(   1066137)SEA FILE=WPIX ABB=ON  ?EXTRACT? OR ?SEPARAT?
L116(    115823)SEA FILE=WPIX ABB=ON  L113 (15A)(STOP(W)COCK## OR VALVE# OR
                CLOSURE# OR STOPCOCK## OR STOPPER# OR PLUG# OR CORK# OR SPOUT#
                OR CONDUIT# )
L117(      5114)SEA FILE=WPIX ABB=ON  (L116 OR L114) (15A)L115
L118(     28068)SEA FILE=WPIX ABB=ON  LIQUID PHASE
L119(        29)SEA FILE=WPIX ABB=ON  L117 AND L118
L120(         7)SEA FILE=WPIX ABB=ON  L119 AND S/DC
L121          1 SEA FILE=WPIX ABB=ON  L120 AND MIXED/TI

=>

=> file stnguide

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FILE CONTAINS CURRENT INFORMATION.
LAST RELOADED: Sep 27, 2002 (20020927/UP).

=> dup rem l54 l121 l122 l123 l124
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PROCESSING COMPLETED FOR L54
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PROCESSING COMPLETED FOR L122
PROCESSING COMPLETED FOR L123
PROCESSING COMPLETED FOR L124
L125         37 DUP REM L54 L121 L122 L123 L124 (1 DUPLICATE REMOVED)

=> d ibib abs 1-37; file home
```

DC = Derwent Code
S = Instrumentation, measuring & testing

L125 ANSWER 1 OF 37 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 2002:185399 HCAPLUS
DOCUMENT NUMBER: 136:229029
TITLE: Method for precipitating mono and multiple layers of organophosphoric and organophosphonic acids and the salts thereof in addition to use thereof
INVENTOR(S): Hofer, Rolf; Pawlak, Michael; Textor, Marcus; Schuermann-Mader, Eveline; Ehrat, Markus; Tosatti, Samuele
PATENT ASSIGNEE(S): Zeptosens A.-G., Switz.
SOURCE: PCT Int. Appl., 88 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002020873	A2	20020314	WO 2001-EP10077	20010831
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
AU 2001089859	A5	20020322	AU 2001-89859	20010831

PRIORITY APPLN. INFO.: CH 2000-1732 A 20000905
WO 2001-EP10077 W 20010831
OTHER SOURCE(S): MARPAT 136:229029

AB The invention relates to a method for pptg. mono or multiple layers of organophosphoric acids of general formula (I(A)) Y-B-OPO3 H2 (IA) or organophosphonic acids of general formula (I(B)) Y-B-PO3 H2 (IB) and the salts thereof, wherein B is an alkyl, alkenyl, alkynyl, aryl, aralkyl, hetaryl or hetaryl alkyl radical and Y is hydrogen or a functional group from the hydroxy, carboxy, amino, optionally low-alkyl- substituted mono or dialkylamino series, thiol, or a neg. acid group from the ester, phosphate, phosphonate, sulfate, sulfonate, maleimide, succinimidyl, epoxy, acrylate series. A biol., biochem. or synthetic indicator element can be coupled to B or Y as addn. or substitution reaction, whereby compds. can also be added imparting on the substrate surface a resistance against protein absorption and/or cell adhesion and in the B chain can be, optionally, composed of one or more ethylene oxide groups rather than one or more CH2 groups. According to the invention, said pptn. occurs on the surfaces of the substrates of pure or mixed oxides, nitrides or carbides of metals and semi-conductors. The invention is characterized in that the water-sol. salts composed of formula (IA) or (IB) are used to treat said surfaces, esp. the surfaces of sensor platforms, implants and medical accessory **devices**. The invention also relates to the use thereof as part of coated sensor platforms, implants and medical accessory **devices** in addn. to novel organophosphoric acids and organophosphonic acids themselves. The optionally substituted compds. of general formula (IA) and (IB), wherein the groups B and Y have the above mentioned designations i.e. optionally substituted alkyl, alkenyl, alkynyl, aryl, aralkyl, hetaryl or hetaryl, are equally called organophosphoric acids or phosphonic acids.

L125 ANSWER 2 OF 37 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 2002:72260 HCAPLUS
DOCUMENT NUMBER: 136:115101
TITLE: Methods and compositions for rapid protein and peptide extraction and isolation from cells using a pore-containing lysis matrix
INVENTOR(S): Blakesley, Robert W.; Flynn, Barbara; Clausen, Peter
PATENT ASSIGNEE(S): Invitrogen Corporation, USA
SOURCE: PCT Int. Appl., 83 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002006456	A1	20020124	WO 2001-US22080	20010713
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
US 2002012982	A1	20020131	US 2001-903864	20010713

PRIORITY APPLN. INFO.: US 2000-218081P P 20000713
US 2001-274630P P 20010312

AB The present invention relates generally to compns., methods and kits for use in extg. and isolating protein or peptide mols. More specifically, the invention relates to such compns., methods and kits that are useful in the isolation of protein or peptide mols. from cells (e.g., bacterial cells, animal cells, fungal cells, viruses, yeast cells or plant cells) via lysis and one or more addnl. isolation procedures, such as one or more filtration and/or chromatog. procedures. In particular, the invention relates to compns., methods and kits wherein protein or peptide mols. are isolated using an integrated pore-contg. lysis/filtration matrix, which may comprise one or more supports (e.g., polyolefin, sintered polyethylene, nitrocellulose, polypropylene, polycarbonate, cellulose acetate, silica, and the like). The compns., methods and kits of the invention are suitable for isolating a variety of forms of protein or peptide mols. from cells. The compns., methods and kits of the invention are particularly well-suited for rapid isolation of recombinant protein or peptide mols. expressed in bacterial cells, either as sol. protein, or as an inclusion body. The invention is particularly useful in high throughput applications, allowing quick isolation and/or anal. of proteins and/or peptides from numerous sources.

REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L125 ANSWER 3 OF 37 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
ACCESSION NUMBER: 2001:324170 BIOSIS
DOCUMENT NUMBER: PREV200100324170
TITLE: Process and **device** for **determining** the activity of **enzymes** in liquids, or the concentration and/or activity of inhibitors in liquids.
AUTHOR(S): Schumacher, Johannes (1); Werle, Bernd

CORPORATE SOURCE: (1) Hildastrasse 9, D-69181 Leimen Germany
PATENT INFORMATION: US 6171851 January 09, 2001
SOURCE: Official Gazette of the United States Patent and Trademark Office Patents, (Jan. 9, 2001) Vol. 1242, No. 2, pp. No Pagination. e-file.
ISSN: 0098-1133.
DOCUMENT TYPE: Patent
LANGUAGE: English
AB A process and **device** are disclosed to **determine** the activity of **enzymes** in liquids in a largely automatic manner. The **device** for carrying out this process has a column with an chromatographic carrier for treating a measurement sample. The carrier is mixed with a substance capable of binding to an **enzyme** inhibitor present in the **measurement** sample and that corresponds to at least one **enzyme**. A **measurement** sample supply is associated to one end of the column. A valve/pump arrangement for filling at least one test **tube** with a carrier and at least part of the measurement sample is connected downstream of the column, in the flow direction of the measurement sample. The carrier is dissociated into cleavage products by the action of the enzyme. The rise in concentration per unit of time of at least one of the cleavage products of the carrier is sensed during an incubation time. As an alternative or supplementary step, the enzyme that corresponds to at least one **enzyme** inhibitor is **extracted** by chromatography from a **measurement** sample to **detect enzyme** inhibitors in liquids and the thus treated **measurement** sample is tested for inhibitor concentration and/or activity.

L125 ANSWER 4 OF 37 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 2001:137466 HCAPLUS
DOCUMENT NUMBER: 134:190327
TITLE: **Device** and method for determining multiple analytes
INVENTOR(S): Abel, Andreas P.; Dubeneck, Gert L.; Ehrat, Markus; Kresbach, Gerhard M.; Pawlak, Michael; Schurmann-Mader, Eveline
PATENT ASSIGNEE(S): Zeptosens A.-G., Switz.
SOURCE: PCT Int. Appl., 71 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001013096	A1	20010222	WO 2000-EP7529	20000803

W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.: CH 1999-1486 A 19990813
AB **App**. comprising a planar optical waveguide which forms part of a sensor platform and a layer, having a plurality of recesses which are open at least at the side of the sensor platform and which form a plurality of

sample containers in a two-dimensional arrangement, which is in contact with the sensor platform directly or through an intermediate sealing medium and which is sealed directly or with the sealing medium is described in which different biochem. or biol. identifying elements for specifically identifying and bonding different analytes are immobilized in .gtoreq.5 discrete measuring areas in a single sample container resp. The measuring areas interact optically with an excitation light from the optical waveguide (e.g., to allow luminescence measurements). Sample or reagent liqs. that were supplied to the sample containers can be removed and other sample or reagent liqs. can then be supplied to the same sample containers, optionally without **washing**.

REFERENCE COUNT: 10 THERE ARE 10 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L125 ANSWER 5 OF 37 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 2001:850833 HCAPLUS
DOCUMENT NUMBER: 135:368958
TITLE: Quantitative analysis
INVENTOR(S): Noda, Yuichiro; Tanaka, Yoshiyuki; Hirao, Konomu
PATENT ASSIGNEE(S): Arkray, Inc., Japan
SOURCE: Eur. Pat. Appl., 43 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1156335	A2	20011121	EP 2001-304372	20010517
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
US 2001055784	A1	20011227	US 2001-858986	20010516

PRIORITY APPLN. INFO.: JP 2000-146498 A 20000518

AB Amts. of components in a specimen can be analyzed with excellent quantitativity. The anal. comprises: measuring an amt. of a component to be analyzed in a specimen; measuring an amt. of a std. component present originally and homeostatically in the specimen other than the component to be analyzed; detg. the amt. of the specimen from the amt. of the std. component thus measured and a known concn. of the std. component in the specimen; and detg. a concn. of the component to be analyzed in the specimen from the amt. of the specimen thus detd. and the amt. of the component to be analyzed thus measured. The quant. anal. of the present invention allows a component to be analyzed to be measured with high quantitativity.

L125 ANSWER 6 OF 37 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
ACCESSION NUMBER: 2001:561559 BIOSIS
DOCUMENT NUMBER: PREV200100561559
TITLE: Multiplexed **enzyme assays** in capillary electrophoretic single-use microfluidic **devices**.
AUTHOR(S): Xue, Qifeng (1); Wainright, Ann; Gangakhedkar, Surekha; Gibbons, Ian
CORPORATE SOURCE: (1) ACLARA BioSciences, Inc., Mountain View, CA: qxue@aclara.com USA
SOURCE: Electrophoresis, (October, 2001) Vol. 22, No. 18, pp. 4000-4007. print.
ISSN: 0173-0835.
DOCUMENT TYPE: Article
LANGUAGE: English

SUMMARY LANGUAGE: English

AB We describe a method of performing multiple **enzyme assays** in a single reaction **vessel**. The resolving power of capillary electrophoresis enables several **enzyme assays** to be **analyzed** at high speed in microfluidic arrays. Multiplexed **measurement** can increase throughput significantly without requiring highly dense microfluidic arrays. **Enzyme assays** in a multiplexed format for selected kinases in this work show essentially identical performance to assays performed individually. This establishes an approach for **screening** one compound against multiple **enzyme** targets simultaneously. Another potential application for performing multiplexed **enzyme assay** is to study protein-protein (especially **enzyme-enzyme**) interaction by monitoring the enzymatic activity changes.

L125 ANSWER 7 OF 37 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
ACCESSION NUMBER: 2002:95819 BIOSIS
DOCUMENT NUMBER: PREV200200095819
TITLE: Effectiveness of an ultrafiltration **device** for use with the **enzyme**-hydrolysed protein method for **determining** endogenous ileal nitrogen and amino acid excretion in the pig.
AUTHOR(S): Hodgkinson, Suzanne M. (1); Moughan, Paul J.
CORPORATE SOURCE: (1) Instituto de Produccion Animal, Universidad Austral de Chile, Valdivia: shodgkin@uach.cl Chile
SOURCE: Journal of the Science of Food and Agriculture, (December, 2001) Vol. 81, No. 15, pp. 1592-1596. print. ISSN: 0022-5142.
DOCUMENT TYPE: Article
LANGUAGE: English

AB The aim of the work was to perform an in vitro study to determine the effectiveness of Centriprep-10 concentrator **devices** for use with the **enzyme**-hydrolysed protein method for the **determination** of endogenous ileal nitrogen and amino acid flows. Different amounts of enzyme-hydrolysed casein (EHC) were added to **tubes** containing digesta collected from pigs that had received a protein-free diet for 5-8 days. The samples were centrifuged and then ultrafiltered using Centriprep-10 concentrators. The precipitate from the centrifugation step was added to the retentate from the ultrafiltration, and this material was analysed for nitrogen and amino acids. The ultrafiltrates were also analysed for nitrogen. The amount of nitrogen that was deemed to have originated from the EHC and remained in the precipitate plus retentate fraction of digesta after processing, expressed as a percentage of the total amount of nitrogen added to the **tubes** as EHC, ranged from 1.0 to 5.0%. The overall mean amounts of amino acid in the precipitate plus retentate fractions originating from the EHC, expressed as a percentage of the amino acids added to the **tubes** as EHC, ranged from 2.4 to 5.8%. The results demonstrate that with Centriprep-10 concentrators there is a less than complete **separation** of nitrogen and amino acids originating from EHC from endogenous material in digesta, but for most amino acids this is unlikely to be due to binding of the amino acids to digesta. The incomplete **separation** of EHC from the endogenous fraction of digesta by Centriprep-10 concentrators may lead to a small overestimation (approximately 2%) of endogenous ileal nitrogen and amino acid flows.

L125 ANSWER 8 OF 37 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 2002:127117 HCAPLUS
DOCUMENT NUMBER: 136:324271
TITLE: Analytical method of measuring tea catechins in human

plasma by **solid**-phase extraction and HPLC with electrochemical detection
AUTHOR(S): Umegaki, Keizo; Sugisawa, Ayako; Yamada, Kazuhiko; Higuchi, Mitsuru
CORPORATE SOURCE: The National Institute of Health and Nutrition, Tokyo, 162-8636, Japan
SOURCE: Journal of Nutritional Science and Vitaminology (2001), 47(6), 402-408
CODEN: JNSVA5; ISSN: 0301-4800
PUBLISHER: Center for Academic Publications Japan
DOCUMENT TYPE: Journal
LANGUAGE: English
AB An anal. method for measuring tea catechins in plasma by **solid**-phase extn. (SPE), followed by HPLC with a coulometric electrochem. detector was developed. The plasma was mixed with an equal vol. of acetonitrile to ppt. protein, and catechins in the resulting supernatant were extd. by SPE, using a C18 cartridge. To correct the extn. efficiency, Et gallate was simultaneously added with acetonitrile as an internal std. Plasma samples were treated in microtubes, and evapn. and SPE were performed by the use of a vacuum centrifuge and vacuum manifold for SPE. The use of these instruments allowed the handling of a large no. of samples simultaneously. In this method, (-)-epicatechin (EC), (-)-epicatechin 3-O-gallate (ECg), (-)-epigallocatechin (EGC), (-)-epigallocatechin 3-O-gallate (EGCg), and Et gallate could be detected as a single peak with high sensitivity. For an anal. of the conjugated form of catechins, plasma samples were treated with glucuronidase and sulfatase. Type H-2 .beta.-glucuronidase effectively digested the conjugated forms, and the enzyme also converted EGCg and ECg to their nongallated form. When the concns. of catechins in plasma were analyzed in subjects who took a single dose of catechin liq., the concn. of free EGCg in plasma reached a max. of 300 nM at 1 h after intake; those of the other free form of catechins increased only slightly after the intake. The concn. of total catechins (free + conjugated forms) in plasma increased up to 2 h after the intake.
REFERENCE COUNT: 15 THERE ARE 15 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L125 ANSWER 9 OF 37 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
ACCESSION NUMBER: 2001:482179 BIOSIS
DOCUMENT NUMBER: PREV200100482179
TITLE: **Pellet** pestle homogenization of agarose gel slices at 45degreeC for deoxyribonucleic acid **extraction**.
AUTHOR(S): Kurien, B. T. (1); Kaufman, K. M.; Harley, J. B.; Scofield, R. H.
CORPORATE SOURCE: (1) 825 NE 13th Street, Oklahoma City, OK, 73104: kurienb@omrf.ouhsc.edu USA
SOURCE: Analytical Biochemistry, (September 15, 2001) Vol. 296, No. 2, pp. 162-166. print.
ISSN: 0003-2697.
DOCUMENT TYPE: Article
LANGUAGE: English
SUMMARY LANGUAGE: English
AB A simple method for **extracting** DNA from agarose gel slices is described. The **extraction** is rapid and does not involve harsh chemicals or sophisticated equipment. The method involves homogenization of the excised gel slice (in Tris-EDTA buffer), containing the DNA fragment of interest, at 45degreeC in a microcentrifuge **tube** with a Kontes pellet pestle for 1 min. The "homogenate" is then centrifuged for 30 s and the supernatant is saved. The "homogenized"

agarose is **extracted** one more time and the supernatant obtained is combined with the previous supernatant. The DNA **extracted** using this method lent itself to restriction **enzyme analysis**, ligation, transformation, and expression of functional protein in bacteria. This method was found to be applicable with 0.8, 1.0, and 2.0% agarose gels. DNA fragments varying from 23 to 0.4 kb were **extracted** using this procedure and a yield ranging from 40 to 90% was obtained. The yield was higher for fragments 2.0 kb and higher (70-90%). This range of efficiency was maintained when the starting material was kept between 10 and 300 ng. The heat step was found to be critical since homogenization at room temperature failed to yield any DNA. **Extracting** DNA with our method elicited an increased yield (up to twofold) compared with that **extracted** with a commercial kit. Also, the number of transformants obtained using the DNA **extracted** with our method was at least twice that obtained using the DNA **extracted** with the commercial kit.

L125 ANSWER 10 OF 37 JICST-EPlus COPYRIGHT 2002 JST
ACCESSION NUMBER: 1020003328 JICST-EPlus
TITLE: Purification and Characterization of Glucuronosyltransferase for the Elucidation of Physiological Role of Saponin in Soybean Plant and the Breeding of a Value-added Soybean Variety.
AUTHOR: SHIRAIWA MASAKAZU; KUROSAWA YASUNORI
CORPORATE SOURCE: Ibaraki Univ., Fac. of Agric.
SOURCE: Daizu Tanpakushitsu Kenkyu (Soy Protein Research), (2001) vol. 4, pp. 1-10. Journal Code: L0927B (Fig. 8, Tbl. 1, Ref. 16)
CODEN: DTKEFV; ISSN: 1344-4050
PUB. COUNTRY: Japan
DOCUMENT TYPE: Journal; Article
LANGUAGE: Japanese
STATUS: New
AB We solubilized and purified microsomal glucuronosyltransferase from soybean, and elucidated its enzymatic properties. A microsome fraction was isolated from germinating soybean seed and treated with various detergents to solubilize the enzyme. The enzyme activity was monitored throughout purification using 14C!-UDP GlcA and soyasapogenol B as substrates. Purification of glucuronosyltransferase was achieved by HiTrap Q, Superdex 200, HiTrap Blue chromatography procedures. This resulted in an enrichment >130-fold relative to the starting homogenate. Purified enzyme was found to require cation for activity. Studies of the substrate specificity of the purified enzyme demonstrated that the specificity for the sugar residue transferred was very high, as no activity was found when UDP-GlcA was replased by other UDP sugars: UDP-Glc and UDP-Gal. Soyasapogenols which are aglycone of soybean saponin are usable acceptors but glycyrrhetinic acid or flavonone is not. These findings suggest that this glucuronosyltransferase was a specific enzyme for UDP-GlcA as donor and soyasapogenols as acceptor, and it was related to biosynthesis of the sugar chain in soybean saponin. This study provides a basis for molecular characterization of key enzyme in saponin biosynthesis in soybean. The isolation of the gene may enable its use in the elucidation of the biosynthesis and physiological role of saponins in soybean. (author abst.)

Inv.
L125 ANSWER 11 OF 37 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 2000:144992 HCAPLUS
DOCUMENT NUMBER: 132:207205
TITLE: Fast measuring **device** of enzymatic activity
INVENTOR(S): Roberts, Neil; Moores, Janet
PATENT ASSIGNEE(S): Rhone-Poulenc Animal Nutrition S.A., Fr.

SOURCE: PCT Int. Appl., 16 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: French
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000011136	A1	20000302	WO 1999-FR1990	19990816
W: AE, AL, AU, BA, BB, BG, BR, CA, CN, CU, CZ, EE, GD, GE, HR, HU, ID, IL, IN, IS, JP, KP, KR, LC, LK, LR, LT, LV, MG, MK, MN, MX, NO, NZ, PL, RO, RU, SG, SI, SK, SL, TR, TT, UA, US, UZ, VN, YU, ZA, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
AU 9951727	A1	20000314	AU 1999-51727	19990816
EP 1105456	A1	20010613	EP 1999-936736	19990816
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
BR 9914294	A	20011106	BR 1999-14294	19990816
JP 2002523038	T2	20020730	JP 2000-566393	19990816

PRIORITY APPLN. INFO.: FR 1998-10533 A 19980819
WO 1999-FR1990 W 19990816

AB The invention concerns a **device** for the fast measurement of enzymic activity in a **solid** food comprising (1) a container for receiving the sample to be tested; (2) a reagent particular to the enzyme whereof the activity is to be measured; and (3) a buffer for placing the enzyme in soln.

REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L125 ANSWER 12 OF 37 JICST-EPlus COPYRIGHT 2002 JST
ACCESSION NUMBER: 1001046822 JICST-EPlus
TITLE: Suppression of D-Galactosamine-induced Liver Injury by Mushrooms in Rats.
AUTHOR: LEE E W; HE P; KAWAGISHI H; SUGIYAMA K
CORPORATE SOURCE: Shizuoka Univ., Shizuoka, Jpn
SOURCE: Biosci Biotechnol Biochem, (2000) vol. 64, no. 9, pp. 2001-2004. Journal Code: G0021A (Fig. 3, Tbl. 1, Ref. 12)
CODEN: BBBIEJ; ISSN: 0916-8451
PUB. COUNTRY: Japan
DOCUMENT TYPE: Journal; Short Communication
LANGUAGE: English
STATUS: New

AB Six species of edible mushroom were found to suppress D-galactosamine-induced enhancement of plasma alanine and aspartate aminotransferase activities when powdered mushrooms were added to the diet (5%) and fed to rats for 2wk. Grifola frondosa exhibited the most potent effect in a dose-dependent manner. A significant effect was observed only from the water-soluble low-molecular-weight fraction of G. frondosa. The results indicate that several mushrooms possess a protective effect against liver injury induced by D-galactosa-mine. (author abst.)

L125 ANSWER 13 OF 37 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
ACCESSION NUMBER: 2001:151064 BIOSIS
DOCUMENT NUMBER: PREV200100151064
TITLE: Sonic wave separation of invertase from a dilute solution to generated droplets.

AUTHOR(S): Tanner, Robert D. (1); Ko, Samuel; Loha, Veara; Prokop, Ales
CORPORATE SOURCE: (1) Chemical Engineering Department, Vanderbilt University, Nashville, TN, 37235: rtanner@vuse.vanderbilt.edu USA
SOURCE: Applied Biochemistry and Biotechnology, (Spring, 2000) Vol. 84-86, pp. 1079-1086. print.
ISSN: 0273-2289.
DOCUMENT TYPE: Article
LANGUAGE: English
SUMMARY LANGUAGE: English

AB It has previously been shown that a droplet fractionation process, simulated by shaking a **separatory funnel** containing a dilute protein solution, can generate droplets richer in protein than present in the original dilute solution, can generate droplets richer in protein than present in the original dilute solution. In this article, we describe an alternative method that can increase the amount of protein transferred to the droplets. The new method uses ultrasonic waves, enhanced by a bubble gas stream to create the droplets. The amount of protein in these droplets increases by about 50%. In this method, the top layer of the dilute protein solution (of the solution-air interface) becomes enriched in protein when ar is bubbled into the solution. This concentrating procedure is called bubble fractionation. Once the protein has passed through the initial buildup, this enriched protein layer is transferred into droplets with the aid of a vacuum above th solution at the same time that ultrasonic waves are introduced. The droplets are then carried over to a condenser and coalesced. We found that this new method provides an easier way to remove the protein-enriched top layer of the dilute solution and generates more droplets within a shorter period than the **separatory funnel** droplet generation method. The added air creates the bubbles and carries the droplets, and the vacuum helps remove the effluent airstream from the condenser. The maximum partition coefficient, the ratio of the protein concentration in the droplets to that in the residual solution (approx 8.5), occurred at pH 5.0.

L125 ANSWER 14 OF 37 JICST-EPlus COPYRIGHT 2002 JST
ACCESSION NUMBER: 1010123272 JICST-EPlus
TITLE: Extraction and Properties of 1-Aminocyclopropane-1-Carboxylate Synthase in Banana Fruit.
AUTHOR: LIU X-J; NAKANO R; KUBO Y; INABA A
CORPORATE SOURCE: Okayama Univ., Okayama
SOURCE: Engei Gakkai Zasshi (Journal of the Japanese Society for Horticaltural Science), (2000) vol. 69, no. 6, pp. 696-701.
Journal Code: F0626A (Fig. 3, Tbl. 2, Ref. 21)
CODEN: EGKZA9; ISSN: 0013-7626
PUB. COUNTRY: Japan
DOCUMENT TYPE: Journal; Article
LANGUAGE: English
STATUS: New

AB The determination of 1-aminocyclopropane-1-carboxylate(ACC) synthase activity is essential in understanding its role in the ethylene biosynthesis during fruit ripening. Because of the high level of soluble tannins, to date, there has been no report on successful determination of banana ACC synthase activity. In this study, we examined the method of Badran and Jones (1965) for the extraction of ACC synthase from banana fruit. The extraction procedure consists of homogenizing the pulp in polyethyleneglycol(PEG)-added buffer, and then washing the homogenate with acetone. This PEG-acetone method gave a high ACC synthase activity. The common extraction method using polyvinylpyrrolidone(PVP) yielded a much lower or no ACC synthase activity. The changes in ACC synthase activity

determined by the PEG-acetone method correlated with changes in ethylene production during ripening. The optimum pH, Km value for substrate S-adenosylmethionine(SAM), and half-life in the presence of SAM for banana ACC synthase were 9.0, 88.MU.M, and 18min respectively. These values were within the range previously reported for ACC synthase in various plant tissues. From these results, we recommend the following extraction method to determine banana ACC synthase activity: freeze the flesh tissue in liquid nitrogen, store it at -80.DEG.C. until use, homogenize the frozen sample in a Waring blender with PEG-added extraction buffer, and later precipitate the enzyme mixture with acetone. (author abst.)

L125 ANSWER 15 OF 37 JICST-EPlus COPYRIGHT 2002 JST
ACCESSION NUMBER: 1000233990 JICST-EPlus
TITLE: Extraction Method by Water followed by Microwave Heating for Analyzing Sugars in Strawberry Fruits.
AUTHOR: OGIWARA I; OHTSUKA Y; YONEDA Y; SAKURAI K; HAKODA N; SHIMURA I
CORPORATE SOURCE: Tokyo Univ. Agriculture And Technol., Tokyo
SOURCE: Engei Gakkai Zasshi (Journal of the Japanese Society for Horticaltural Science), (1999) vol. 68, no. 5, pp. 949-953. Journal Code: F0626A (Fig. 2, Tbl. 4, Ref. 8) CODEN: EGKZA9; ISSN: 0013-7626
PUB. COUNTRY: Japan
DOCUMENT TYPE: Journal; Article
LANGUAGE: English
STATUS: New
AB The sugar contents of strawberry fruits extracted by the conventional ethanol method were compared with those extracted with water followed by microwave heating. Sucrose, glucose fructose and total sugar contents did not differ significantly between the two methods. The time for the water extraction method required approximately half that needed for the conventional ethanol method. Sugar metabolizing enzymes are inactivated by boiling in a microwave oven. In this method, frozen fruits should be chopped, quickly weighted at a low temperature, and the pieces immediately heated in a microwave oven. After strawberry fruits are heated in a microwave oven, they could be processed at a room temperature. Thus, the water extraction method followed by microwave heating in less time consuming but equally accurate for measuring the concentration and composition of soluble sugars in strawberry fruits. (author abst.)

L125 ANSWER 16 OF 37 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
ACCESSION NUMBER: 1999:381647 BIOSIS
DOCUMENT NUMBER: PREV199900381647
TITLE: Partitioning invertase between a dilute water solution and generated droplets.
AUTHOR(S): Ko, Samuel; Loha, Veara; Du, Liping; Prokop, Ales; Tanner, Robert D. (1)
CORPORATE SOURCE: (1) Chemical Engineering Department, Vanderbilt University, Nashville, TN, 37235 USA
SOURCE: Applied Biochemistry and Biotechnology, (Spring, 1999) Vol. 77-79, No. 0, pp. 501-510. ISSN: 0273-2289.
DOCUMENT TYPE: Article
LANGUAGE: English
SUMMARY LANGUAGE: English
AB Water droplets or mist occur naturally in the air at seashores. These water droplets carry inorganic and organic substances from the sea to the land via the air, creating fertile land in sandy coastal areas (1). The same phenomenon occurs in an air-fluidized bed bioreactor (2). In an air-fluidized bed reactor, proteins can be transferred from the bioreactor

semisolid bulk phase to an enriched droplet phase. This protein transfer process (droplet fractionation) can be experimentally simulated by shaking a **separatory funnel** containing a dilute solution of a given protein, which can be an **enzyme** like invertase. The created droplets become richer in invertase (protein) than that of the original dilute solution. The droplets can then be coalesced by trapping them and recovering the concentrated protein in the new liquid phase. Typically, in such a droplet fractionation process a collected **enzyme** can be degraded in its ability to catalyze a chemical reaction. In this article, we explore whether the initial solution pH control variable can be adjusted to minimize the decrease of **enzyme** activity in this process. The protein droplet recovery problem is one in which the recovered amount of desired protein (**enzyme**) in the droplet is maximized, subject to the minimization of the **enzyme** activity loss. The partition coefficient, which is the ratio between the protein concentration in the droplets and the residual solution, is maximized at approx 4.8 and occurs at pH 3.0. Here, the partition coefficient for invertase decreases as the initial solution pH increases, between pH 3.0 and 8.0. Interestingly, the initial solution surface tension seems to be inversely proportional to the partition coefficient. The partition coefficient reaches a maximum value at a surface tension value of approx 63 mN/m at pH 3.0. The enzymatic activity of the initial, the residual, and the droplet solutions all decrease as the bulk solution pH increases. A decrease of enzymatic activity was observed in the residual bulk solution when compared with that in the initial bulk solution at all pH levels. Also, up to 90% of the invertase activity was lost in the droplets when compared to the initial bulk solution.

L125 ANSWER 17 OF 37 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
ACCESSION NUMBER: 2000:8612 BIOSIS
DOCUMENT NUMBER: PREV200000008612
TITLE: Expanded **bed** adsorption for recovery of patatin from crude potato juice.
AUTHOR(S): Straetkvern, Knut O. (1); Schwarz, Jurgen G.; Wiesenborn, Dennis P.; Zafirakos, Elias; Lihme, Allan
CORPORATE SOURCE: (1) Department of Agricultural and Natural Sciences, Hedmark College, Blaestad, N-2322, Ridabu Norway
SOURCE: Bioseparation, (1999) Vol. 7, No. 6, pp. 333-345. ISSN: 0923-179X.
DOCUMENT TYPE: Article
LANGUAGE: English
SUMMARY LANGUAGE: English
AB An expanded bed adsorption process was used to isolate patatin possessing esterase activity, from a crude juice of potato tubers. Patatin is the major storage protein of potato tubers and is released in ample amounts in the processing effluent during starch milling. We employed mixed mode affinity resins, where the binding depends primarily on the pH, and is almost independent of the ionic strength. From a library of mixed mode chemistries involving both charged and hydrophobic functions, we screened for ligands with binding specificity for patatin. The dynamic binding capacity of two high density (1.4-1.5 g ml-1) patatin-binding agarose-glass resins in response to change of linear velocity (85-230 cm h-1) was tested in packed (25 ml) and expanded (250 ml) column modes. The column operation included a loading step at low expansion; H/Hoapprx1.2. Adsorption from crude juice at pH 7.5, retained patatins up to a breakthrough level of 50%. The eluate fraction at pH 3.5, now effectively stripped from the pigments, provided a 2.5-fold enzyme enrichment and produced 4 g protein per cycle. Column productivity was 122 kAU L-1 h-1. The study, using potato juice as model feedstock, demonstrated the

feasibility of expanded bed-recovery of potentially valuable proteins from plant biomass.

L125 ANSWER 18 OF 37 JICST-EPlus COPYRIGHT 2002 JST
ACCESSION NUMBER: 991044389 JICST-EPlus
TITLE: Systematic extraction of useful material from apple juice extraction residue accompanied by weight reduction effect. (Aomori Prefect.u agriculture and forestry division S).
AUTHOR: NAKAMURA SHINGO
CORPORATE SOURCE: Hirosaki Univ., Fac. Agriculture and Life Sci., JPN
SOURCE: Nogaku Seimei Kenkyu kara mita Aomoriken Nogyo no Yuisei. Aomoriken sHiyaku no Met Hakkutsu Jigyo Hirosaki Daigaku Nogaku Seimei Kagakubu Hokokusho. Heisei 11nen, (1999) pp. 51-52. Journal Code: N19992967 (Fig. 1)
PUB. COUNTRY: Japan
DOCUMENT TYPE: Journal; Commentary
LANGUAGE: Japanese
STATUS: New

L125 ANSWER 19 OF 37 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1998:747656 HCAPLUS
DOCUMENT NUMBER: 130:20059
TITLE: **Device** for detection of multiple biomolecules and **dissolved** substances in liquids
INVENTOR(S): Stumpf, Albert
PATENT ASSIGNEE(S): Germany
SOURCE: PCT Int. Appl., 31 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9850774	A1	19981112	WO 1998-EP2625	19980504
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, GW, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
AU 9876526	A1	19981127	AU 1998-76526	19980504
EP 980515	A1	20000223	EP 1998-924275	19980504
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, FI				
DE 19819857	C2	20000831	DE 1998-19819857	19980504
PRIORITY APPLN. INFO.:			DE 1997-19718828 A	19970505
			WO 1998-EP2625 W	19980504

AB A **device** for detecting biomols. and **dissolved** substances in liqs., esp. under conditions in which strict sterility is to be obsd., has a sampling system which can be brought into direct contact with the liq. to be analyzed inside a container (i.e., a bioreactor) and an anal. unit. The samples that are collected are brought into contact with a sensor that suitably is specific to the compd. to be analyzed, esp. a biosensor with specific receptors (an antibody, etc.) that can detect the compd. shortly after it is sampled. The **device**, which can

be equipped with further sepn. means (such as dialyzer, membrane filter, etc.), can be conveniently sterilized by exposure to high-temp. steam. The invention can be used in the foodstuff, pharmaceutical and chem. industry, for processes of environmental biotechnol. and prodn. of active substances by means of recombinant cells and enzymes.

REFERENCE COUNT: 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L125 ANSWER 20 OF 37 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1998:721463 HCAPLUS
DOCUMENT NUMBER: 129:313096
TITLE: **Device** and **apparatus** for the simultaneous detection of multiple analytes
INVENTOR(S): Fitzgerald, Stephen Peter; Lamont, John Victor; Mcconnell, Robert Ivan; Benchikh, El Ouard
PATENT ASSIGNEE(S): Randox Laboratories Ltd., UK
SOURCE: Eur. Pat. Appl., 26 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 874242	A1	19981028	EP 1998-303019	19980420
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
BR 9800655	A	19990810	BR 1998-655	19980417
CA 2235183	AA	19981021	CA 1998-2235183	19980420
AU 9861988	A1	19981022	AU 1998-61988	19980420
AU 713388	B2	19991202		
NO 9801766	A	19981022	NO 1998-1766	19980420
GB 2324866	A1	19981104	GB 1998-8309	19980420
GB 2324866	B2	20011114		
RU 2168174	C2	20010527	RU 1998-107571	19980420
JP 10319011	A2	19981204	JP 1998-110687	19980421
ZA 9803345	A	19990421	ZA 1998-3345	19980421
CN 1215167	A	19990428	CN 1998-115254	19980421

PRIORITY APPLN. INFO.: EP 1997-302707 A 19970421

AB A **solid** state **device** for performing multi-analyte assays, comprises a substrate and a multiplicity of discrete reaction sites each bearing a ligand covalently bonded to the substrate, wherein the surface of the substrate between the reaction sites is inert with respect to analyte. Such a **device** may be obtained by a process of activating the surface of the substrate, and applying an array of ligands on to discrete areas on the surface.

L125 ANSWER 21 OF 37 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
ACCESSION NUMBER: 1999:247550 BIOSIS
DOCUMENT NUMBER: PREV199900247550
TITLE: The effect of pH on the activity of cellulase fractionated between bulk and droplet phases.
AUTHOR(S): Loha, Veara; Nun, Shuhaida; Sarkawi, Salina; Prokop, Ales; Tanner, Robert D. (1); Vitolo, Michele
CORPORATE SOURCE: (1) Chemical Engineering Department, Vanderbilt University, Nashville, TN, 37235 USA
SOURCE: Revista de Farmacia e Bioquimica da Universidade de Sao Paulo, (1998) Vol. 34, No. 2, pp. 101-107.
ISSN: 0370-4726.

DOCUMENT TYPE: Article
LANGUAGE: English
SUMMARY LANGUAGE: English
AB Aqueous cellulase solutions were vigorously shaked in a **separatory funnel**, promoting a partition of the **enzyme** between the droplets formed and the residual bulk solution. The partition coefficient (Kp) was defined as the ratio of protein concentrations in the droplets and in the residual bulk solution. The Kp depended on both initial pH and cellulase concentration, being markedly favoured by using dilute **enzyme** solutions (up to 40 mg/L) and initial pH between 2.0 and 3.0.

L125 ANSWER 22 OF 37 CAPLUS COPYRIGHT 2002 ACS DUPLICATE 1
ACCESSION NUMBER: 1997:634841 CAPLUS
DOCUMENT NUMBER: 127:277317
TITLE: Response surface analysis of enzyme aided extraction of **soybean**
AUTHOR(S): Kashyap, M. C.; Agrawal, Y. C.; Sarkar, B. C.; Singh, B. P. N.
CORPORATE SOURCE: Department of Process and Food Engineering, G.B. Pant University of Agriculture and Technology, Pantnagar, 263 145, India
SOURCE: Journal of Food Science and Technology (1997), 34(5), 386-390
CODEN: JFSTAB; ISSN: 0022-1155
PUBLISHER: Association of Food Scientists and Technologists (India)
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Response surface anal. of enzymic hydrolysis of soy flakes was conducted and the parameters optimized to enhance both the extractable oil and the extractability of soy flakes. The optima were at 24.58% wb moisture content, 14.23% v/w enzyme concn. and 13.29 h hydrolysis period. Soy flakes hydrolyzed under optimal conditions had an extractable oil content of 24.93% on moisture-free basis compared to 22.88% in unhydrolyzed flakes and an extractability of 99.83% compared to 82.22% of the extractable oil in 16 h on **Soxhlet** app. For 99% oil recovery, as practiced com., enzymic hydrolysis reduced the **Soxhlet** extn. time by over 44% in soy flakes.

L125 ANSWER 23 OF 37 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1997:341596 CAPLUS
DOCUMENT NUMBER: 127:59973
TITLE: Fully automated isolation of natural products
AUTHOR(S): Mellor, Frank; God, Ralf; Bindseil, Kai Uwe; Gumm, Holger
CORPORATE SOURCE: Merck K.-G.a.A., Darmstadt, D-64271, Germany
SOURCE: GIT Spezial Chromatographie (1997), 17(1), 19-22
CODEN: GSCHEP; ISSN: 0940-032X
PUBLISHER: GIT Verlag
DOCUMENT TYPE: Journal
LANGUAGE: German
AB Sepbox, a new, completely automatic chromatog. system has been developed to quickly sep. highly complex mixts. of natural exts. into the pure or almost pure substances; these can then be used directly for biol. testing. The method is a combination of HPLC and **solid** phase extn. (SPE) and is coupled into a HPLC/SPE/HPLC/SPE unit with 4 semi-preparative pumps, 7 **sepg. columns**, 28 collecting **columns** for SPE, >50 **valves** for **column**-switching, a light scattering detector and 2 UV detectors for monitoring. The whole system

is controlled by a specially developed software package. An ext. of 1-5 g can be fractionated into 200-300 pure compds. within 24 h. Thus the Sepbox is ideal for delivering samples for high-through-put screening of natural products. Other applications are in the fields of ext. purifn., development of methods for biol. pest control, search for new scents and aromas, as well as biodegradable substances from growing raw materials.

L125 ANSWER 24 OF 37 JICST-EPlus COPYRIGHT 2002 JST
ACCESSION NUMBER: 970173438 JICST-EPlus
TITLE: Role of Proteasome in the Conversion of Muscle to Meat.
AUTHOR: SUZUKI ATSUSHI; IKEUCHI YOSHIHIDE; HONMA NORIYUKI
CORPORATE SOURCE: Niigata Univ., Fac. of Agric.
SOURCE: Shokuniku ni kansuru Josei Kenkyu Chosa Seika Hokokusho, (1996) vol. 14(1995), pp. 251-255. Journal Code: X0296A (Fig. 7, Ref. 11)
PUB. COUNTRY: Japan
DOCUMENT TYPE: Journal; Article
LANGUAGE: Japanese
STATUS: New
AB This paper describes the purification and properties of a multi catalytic proteinase complex, proteasome, from rabbit skeletal muscle. Proteasome activities were gradually lost with decreasing pH, but the degree of decrease was substrate-dependent, and activities at pH5.0 still showed about 30-60% of the activity at pH8.0. This indicates the possibility that the proteasome is active in the muscle during ageing. When the proteasome was heated at 60.DEG.C. for 20min and treated in the presence of 0.01% SDS. the activity increased over 1.5 times and 1.6 times, respectively. Proteasome was also activated by the high hydrostatic pressure up to 100MPa and inactivated at 200MPa or higher. Electron microscopic observation revealed that the obvious gap between filaments structure and complete loss of M-line, with partial loss of Z-line were caused by proteasome. These results indicate that proteasome may affect on meat tenderization under high pressure treatment. (author abst.)

L125 ANSWER 25 OF 37 JICST-EPlus COPYRIGHT 2002 JST
ACCESSION NUMBER: 960554291 JICST-EPlus
TITLE: Pectinesterase activity during the Ripening stage from Strawberry.
AUTHOR: INARI TAEKO; TAKEUCHI TOKUO; TOMOEDA MIKIO
CORPORATE SOURCE: Gifu Women's Univ., Fac. of Home Econ.
SOURCE: Gifu Joshi Daigaku Kiyo (Bulletin of Gifu Women's College), (1996) no. 25, pp. 31-37. Journal Code: Z0746A (Fig. 6, Tbl. 1, Ref. 10)
ISSN: 0286-8644
PUB. COUNTRY: Japan
DOCUMENT TYPE: Journal; Article
LANGUAGE: Japanese
STATUS: New
AB Some fruits and vegetables are generally said to become soft by ripening. In this study pectinesterase(E.C.3.1.1.11 PE) activity during the ripening stage from strawberry(Hoko wase) was examined. 1) The activity of the PE did not hardly change with the ripening of strawberry. 2) The activities of the PE were about 1800U/100g fresh weight strawberry. 3) The crude PE from strawberry was purified by salting-out and affinity chromatographic methods. 4) After purification, the relative activities of the separated PE were rised to 33-fold(early ripe), 12-fold(half ripe), 19-fold(over ripe). 5) The molecular weight of the separated PE was estimated about 10,000 by HPLC. 6) The freezing dried PE was in good preservation. (author abst.)

L125 ANSWER 26 OF 37 JICST-EPlus COPYRIGHT 2002 JST
ACCESSION NUMBER: 960655967 JICST-EPlus
TITLE: Genotypic variation in photosynthetic characteristics and kinetic properties of RuBP carboxylase in *Triticosecale Witt.
AUTHOR: REDDY A R
CORPORATE SOURCE: Pondicherry Univ., Pondicherry, IND
SOURCE: Wheat Inf Serv, (1996) no. 82, pp. 19-23. Journal Code: Y0174A (Tbl. 2, Ref. 13)
ISSN: 0510-3517
PUB. COUNTRY: Japan
DOCUMENT TYPE: Journal; Article
LANGUAGE: English
STATUS: New
AB The photosynthetic capacity of single leaves and kinetic properties of RuBP carboxylase were studied among seven genotypes of *Triticosecale Witt. The photosynthetic rates among the genotypes ranged from 15.7 to 25.8.MU.mol m-2s-1 at an irradiance of 1500.MU.mol quanta m-2s-1. The cultivar 6A-1093 showed the highest rates of CO2 fixation while 6A-854 showed the lowest. The photosynthetic rates were significantly correlated with RuBP carboxylase activities in leaf extracts. There was no apparent difference in the chlorophyll content among the genotypes. The Km and Vmax values for RuBP carboxylase in leaf extracts greatly varied among the genotypes. It was concluded that the variation in the rates of CO2 fixation and kinetic characteristics of RuBP carboxylase among triticale genotypes is important in selection of varieties for improved photosynthetic productivity. (author abst.)

L125 ANSWER 27 OF 37 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1994:608401 CAPLUS
DOCUMENT NUMBER: 121:208401
TITLE: Soxhlet extraction apparatus for extracting nonvolatile components from solid samples by solvents
INVENTOR(S): Kubo, Satoru
PATENT ASSIGNEE(S): Kubota Kk, Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 4 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 06190205	A2	19940712	JP 1992-359106	19921225

AB The app. comprises a vessel, a cylindrical extn. column having a sample chamber connected to the top opening of the vessel via a vertical path (with **valve**) under the chamber, and a condenser connected to the top of the **column**. The app. is used for detn. of crude fats, etc.

L125 ANSWER 28 OF 37 JICST-EPlus COPYRIGHT 2002 JST
ACCESSION NUMBER: 950549374 JICST-EPlus
TITLE: Extraction of a proteolytic enzyme from the fruit of a kiwifruit and utilization to softening of adult chicken meat.
AUTHOR: KAWASHIMA KAZUKO
CORPORATE SOURCE: Aichi-ken Agric. Res. Cent.
SOURCE: Kanto Tokai Nogyo no Shingijutsu, (1993) no. 10(1993), pp. 307-310. Journal Code: L0587A (Fig. 1, Tbl. 4)

PUB. COUNTRY: Japan
DOCUMENT TYPE: Journal; Short Communication
LANGUAGE: Japanese
STATUS: New

L125 ANSWER 29 OF 37 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1993:628638 CAPLUS
DOCUMENT NUMBER: 119:228638
TITLE: Extraction, washing, and suspension-separation column
INVENTOR(S): Blyakher, Iosif G.; Shterenzon, Aleksandr L.; Mirkhodzhaev, Mirgani M.; Utabaev, Zafar U.; Gofman, Mikhail S.; Terentev, Vladimir B.; Vajsbejn, Mark M.; Korostelev, Aleksandr V.
PATENT ASSIGNEE(S): Ural Scientific-Research Chemical Institue, USSR
SOURCE: U.S.S.R. From: Izobreteniya 1992, (34), 25-6.
CODEN: URXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Russian
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
SU 1761178	A1	19920915	SU 1990-4877518	19901024

AB The column includes a housing, upper and lower settling chambers, media inlets and outlets, and perforated plates. For increasing the process efficiency by increasing the flow of **extractant** or washing liq. and preventing the piling of **solids** and for simplifying the **column** construction, the lower settling chamber has an alternately operated **valve**, the housing is an assembly of truncated cones connected with greater and smaller bases, and the plates are located at joints of smaller bases.

L125 ANSWER 30 OF 37 HCAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1991:403747 HCAPLUS
DOCUMENT NUMBER: 115:3747
TITLE: Enzyme mass transfer coefficient in aqueous two phase system using a packed extraction column
AUTHOR(S): Patil, T. A.; Jafarabad, K. Rostami; Sawant, S. B.; Joshi, J. B.
CORPORATE SOURCE: Dep. Chem. Technol., Univ. Bombay, Bombay, 400 019, India
SOURCE: Can. J. Chem. Eng. (1991), 69(2), 548-56
CODEN: CJCEA7; ISSN: 0008-4034
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Fractional dispersed phase hold-up and dispersed side mass transfer coeffs. for amyloglucosidase were measured in a 56 mm i.d. packed extn. column using a sodium sulfate-polyethylene glycol 4000 system. Raschig rings (3 to 13.3 mm), Berl saddles (12 mm), Pall rings (12.6) mm, glass spheres (5.2 mm), and structured wire gauze were used as packings. The effect of packing size was investigated in the case of ceramic Raschig rings. The effect of phase compn. of the aq. phase system also was studied. Correlations have been developed for fractional dispersed phase hold-up and volumetric mass transfer coeff. with packing voidage, dry surface area of packings, superficial dispersed phase velocity, and the liq. phase phys. properties.

L125 ANSWER 31 OF 37 JICST-EPlus COPYRIGHT 2002 JST
ACCESSION NUMBER: 890370869 JICST-EPlus

TITLE: Phosphoenolpyruvate carboxylase level in soybean seed highly correlates to its contents of protein and lipid.
AUTHOR: SUGIMOTO T; MONMA M; KAWAMURA Y; SAIO K TANAKA K
CORPORATE SOURCE: National Food Research Inst., Ministry of Agriculture, Forestry, and Fisheries, Tsukuba, JPN National Inst. Environmental Studies, Tsukuba, JPN
SOURCE: Agric Biol Chem, (1989) vol. 53, no. 3, pp. 885-887. Journal Code: G0021A (Fig. 1, Ref. 12) CODEN: ABCHA6; ISSN: 0002-1369
PUB. COUNTRY: Japan
DOCUMENT TYPE: Journal; Short Communication
LANGUAGE: English
STATUS: New

L125 ANSWER 32 OF 37 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1987:639228 CAPLUS
DOCUMENT NUMBER: 107:239228
TITLE: Automatic **solids** extraction method and **apparatus** with solvent recovery
INVENTOR(S): Langer, Alfred
PATENT ASSIGNEE(S): Gerhardt, C., Fabrik und Lager Chemischer Apparate G.m.b.H. und Co. K.-G., Fed. Rep. Ger.
SOURCE: Ger. Offen., 8 pp. CODEN: GWXXBX
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 3710385	A1	19871015	DE 1987-3710385	19870328
DE 3710385	C2	19900913		

AB For quality control of **solid** samples, an efficient solvent extn. is conducted in which the sample is contacted with hot solvent vapor and washed with condensed liq. solvent while the unused solvent is collected and recovered. The **app.** comprises a sample cage suspended in a solvent bath heated by a heating plate, such that hot solvent vapors rise and contact the sample and also a condenser coil above the solvent bath. A portion of the condensed solvent drips onto and washes the sample while the remainder is automatically directed via a funnel and line through a control valve to a collection vessel.

L125 ANSWER 33 OF 37 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1987:121970 CAPLUS
DOCUMENT NUMBER: 106:121970
TITLE: **Apparatus** for **solid**-liquid extraction and/or reaction
INVENTOR(S): Fancovic, Karol; Stimbranyi, Ladislav; Hauskrecht, Peter; Cervenka, Zdenek
PATENT ASSIGNEE(S): Czech.
SOURCE: Czech., 5 pp. CODEN: CZXXA9
DOCUMENT TYPE: Patent
LANGUAGE: Slovak
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE

CS 234842	B1	19850416	CS 1983-6023	19830817

AB A lab. ground-joint glass **app.** is described for extn. of **solids** with liqs. at various temps. or for reaction of **solids** with liqs. The **app.** consists of a heating section, insulation jacket, extn. and melting sections, a separator, and a condenser. It has a boiling flask with a magnetic stirrer and a gas or extn.-solvent inlet, a heating plate, an evacuated insulation jacket, and an extn. tube contg. the **solid** material on a fritted-glass plate. The **separator** for condensate is placed between the **extn. tube** and the condenser and is connected with a receiver through a **valve**. The **app.** can be also made of quartz or Teflon for special purposes.

L125 ANSWER 34 OF 37 JICST-EPlus COPYRIGHT 2002 JST
ACCESSION NUMBER: 860446838 JICST-EPlus
TITLE: Formation of methyl and ethyl .BETA.-D-fructofuranosides in aqueous methanol and ethanol extracts of Japanese persimmon fruits.
AUTHOR: HIRAI SHUNJI; ROKUHARA SAYAKA; SHIMIZU SUMIO
CORPORATE SOURCE: Iida Women's Junior College
SOURCE: Nippon Nogei Kagakkaishi (Nippon Nogeikagaku Kaishi), (1986) vol. 60, no. 7, pp. 521-523. Journal Code: F0231A (Fig. 1, Tbl. 1, Ref. 9)
CODEN: NNKKAA; ISSN: 0002-1407
PUB. COUNTRY: Japan
DOCUMENT TYPE: Journal; Short Communication
LANGUAGE: Japanese
STATUS: New

AB Enzymatic formation of methyl and ethyl .BETA.-D-fructofuranosides was investigated in aqueous methanol and ethanol extracts of Japanese persimmon fruits. The fruits were extracted with 60% methanol or 40% ethanol at 20.DEG.C for 24hr. The extracts were concentrated and submitted to Dowex 1X2 (OH) column chromatography, to separate methyl and ethyl .BETA.-D-fructofuranoside for 13C-NMR and polarimetric analysis. The invertase in the persimmon was active considering the high concentration of methanol and ethanol. The formation of .BETA.-D-fructofuranosides in the alcoholic extracts of the fruits was due to the action of invertase. In extraction at 20.DEG.C for 24hr, 40-50% methanol gave 10-15% methyl, and 20% ethanol, 3-6% ethyl .BETA.-D-fructofuranosides, to total mono and oligo saccharides (free sugars). (author abst.)

L125 ANSWER 35 OF 37 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
ACCESSION NUMBER: 1986:116190 BIOSIS
DOCUMENT NUMBER: BA81:26606
TITLE: A NEW CENTRIFUGAL FILTRATION **DEVICE** FOR FREE DRUG **SEPARATION.**
AUTHOR(S): TROUPIN A S; SHAW L M
CORPORATE SOURCE: TOXICOL. LAB., WILLIAM PEPPER LAB., HOSP. UNIV. PA., PHILADELPHIA, PA. 19104, USA.
SOURCE: EPILEPSIA, (1985) 26 (5), 455-459.
CODEN: EPILAK. ISSN: 0013-9580.
FILE SEGMENT: BA; OLD
LANGUAGE: English

AB A new centrifugal membrane filtration **device** (Syva Corporation) has been evaluated to determine its capabilities for **separation** of free phenytoin for analysis. The **device** is a test **tube**-size **cylinder** with two compartments **separated** by the membrane. In serum samples from 70 patients at the Hospital of the University of Pennsylvania, free phenytoin was

prepared by the new **device** and by equilibrium dialysis. Levels were **assayed** by gas chromatography and **enzyme immunoassay** with good agreement at all phenytoin levels. Although pH has a significant effect on the binding of some drugs to serum proteins, phenytoin binding increased to only a small extent as pH was increased from 7.0 to 7.8 (85-88.5% bound). Centrifugal filtration with this **device** is a reliable, fast, and easy way to prepare free drug from serum and does not include the dilution artifact inherent in equlibrium dialysis.

L125 ANSWER 36 OF 37 WPIX (C) 2002 THOMSON DERWENT
ACCESSION NUMBER: 1981-23536D [14] WPIX
TITLE: **Liq. phase** sampler **tube** - with **separate** inlets for organic and aq. phase and shifting **valve** cone for **mixed** phase.
DERWENT CLASS: A97 J04 K05 **S03** X14
INVENTOR(S): ANTONI, H; KLUTH, M; STICH, W
PATENT ASSIGNEE(S): (GESL) KERNFORSCHUNGSZENT KARLSRUHE
COUNTRY COUNT: 4
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
DE 2933368	A	19810326	(198114)*		
GB 2060562	A	19810507	(198119)		
FR 2463925	A	19810403	(198121)		
US 4348909	A	19820914	(198239)		
GB 2060562	B	19830407	(198314)		
DE 2933368	C	19840607	(198424)		

APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
DE 2933368	A	DE 1979-2933368	19790817

PRIORITY APPLN. INFO: DE 1979-2933368 19790817
AN 1981-23536D [14] WPIX
AB DE 2933368 A UPAB: 19930915
A probe to extract samples of liqs. of the different phases of immiscible substances, e.g. organic, aq. and mixed phase during the reprocessing of nuclear fuel elements by the PUREX process, has a sampler tube which is closed at the end by a plug, made of a coalescence promoting material.

A cavity in the latter has inlet bores, facing in the direction of incidence of the phase concerned. A valve cone of the same material has bores which link the cavity with the inside of the sampler tube.

This enables the organic phase, in particular, to be sampled without adulteration. The probe is small and is suitable for all three phases.

ABEQ DE 2933368 C UPAB: 19930915
Space-saving sampler for partial quantities of liqs. in different phases comprising two immiscible liqs., e.g. organic, aq. and mixed-phase liqs. used in the PUREX reprocessing of nuclear fuels, provides just one structural component to effect clean sepn. of continuous and disperse phases. The sampler, which can be remote controlled, operates without contamination and has a sampling tube with a stopper which is closed to a material that functions as a coalescence aid, comprising a single phase that is taken up by a cavity. The phase proceeding in the direction of flow is met by bore-holes which point in the opposite direction, the

extension of which is sealed off from the tube interior towards the beginning of the tube by a valve cone with the same properties as the stopper. The cavity and/or its extension are connected via bore-holes in the valve cone with the tube interior.

The stainless steel tube may have a stopper made of PTFE or polyethylene.

L125 ANSWER 37 OF 37 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
ACCESSION NUMBER: 1979:167378 BIOSIS
DOCUMENT NUMBER: BA67:47378
TITLE: FLOW THROUGH **VISCOMETER** FOR USE IN THE AUTOMATED **DETERMINATION** OF HYDROLYTIC **ENZYME** ACTIVITIES APPLICATION IN PROTEASE AMYLASE AND PECTINASE **ASSAYS.**
AUTHOR(S): KUIPER J; ROELS J A; ZUIDWEG M H J
CORPORATE SOURCE: RES. DEV., GIST-BROCADES N.V., DELFT, NETH.
SOURCE: ANAL BIOCHEM, (1978) 90 (1), 192-203.
CODEN: ANBCA2. ISSN: 0003-2697.
FILE SEGMENT: BA; OLD
LANGUAGE: English

AB A flow-through viscometer developed for application as a sensor in automated analysis is described. Its essential part is a glass capillary connected to the sample flow circuit with thin-walled rubber **tubes** at both ends. These **tubes separate** the fluid to be tested from a hydraulic liquid. This construction ensures the absence of dead space and a minimal test volume. The usefulness of the **apparatus** is demonstrated in the automated assay of protease, amylase and pectinase activity. Development of a mathematical model describing the enzymic degradation of macromolecules resulted in a reciprocal equation allowing rectilinear presentation of the calibration data. The feasibility of this model was tested by linear regression analysis of the data.

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